

GOVERNMENT AND FISCAL POLICY IN THE CONSUMPTION-SAVINGS MODEL

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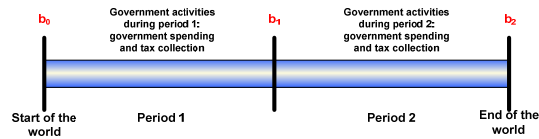
A Government in the Two-Period Model

A DYNAMIC MODEL OF THE GOVERNMENT

- So far only consumers in our two-period world
- Introduce government in very simple form
 - Exists for both periods
 - Has spending in each period it needs to finance – can be financed via
 - Taxes
 - Issuing government debt/assets

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- **Notation**
 - g_1 : real government spending in period 1
 - g_2 : real government spending in period 2
 - b_0 : government asset position at beginning of period 1/end of period 0
 - b_1 : government asset position at beginning of period 2/end of period 1
 - b_2 : government asset position at beginning of period 3/end of period 2
 - r : real interest rate between periods

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- Economic activities/actions described by period budget constraints
 - Period-1 government budget constraint

$$g_1 + b_1 = (1+r)b_0 + t_1$$

Total expenditure in period 1:
period-1 spending + wealth to carry into period 2

Total income in period 1:
period-1 tax collections + income from wealth carried into period 1 (inclusive of interest)

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□ Period-2 government budget constraint

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Total expenditure in period 2:
period-2 spending + wealth to
carry into period 3

Total income in period 2:
period-2 tax collections +
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Savings during period 1 (a flow) Asset income during period 1 (a flow)

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□ Definition: A government's **savings** during a given period is the **change in its wealth** during that period

- "Fiscal surplus" if government savings is positive
- "Fiscal deficit" if government savings is negative

Surplus/deficit is a flow measure

GOVERNMENT BUDGET CONSTRAINT(S)

□ Adopt a **lifetime** view of the budget constraint(s)

- All analysis conducted from perspective of beginning of period 1
- Period-1 government budget constraint $g_1 + b_1 = t_1 + (1+r)b_0$
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For graphical simplicity, will often assume $b_0 = 0$ (i.e., government begins life with zero net wealth).
 Note this is a *different* assumption than $b_2 = 0$.

CONSUMER BUDGET CONSTRAINT(S)

- Introduce tax payments into consumer side of model
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Present discounted value (PDV) of all lifetime expenditure

Present discounted value (PDV) of all lifetime **disposable** income (i.e., after-tax income)

ECONOMY-WIDE RESOURCE FRONTIER

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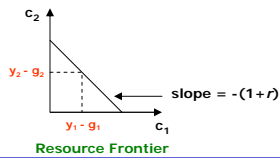
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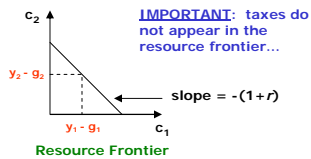
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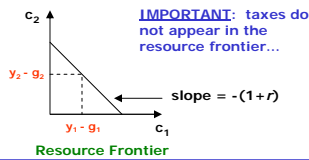
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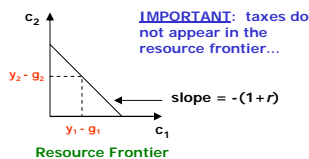
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An important theoretical result for the analysis of tax policy.

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Analyzing effects of changes in tax policy on optimal consumption choices is the key

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- ❑ Ricardian Equivalence is to tax theory what perfect competition is to standard economic theory
 - ❑ Idea relies crucially on lump-sum taxes...
 - ❑ ...even though in reality lump-sum taxes do not exist...